The Cube stands elevated and proud on the ever-evolving skyline of Birmingham's vibrant Westside district. Inspired by the area's origins as a jewellery quarter, this high-end mixed use development features 40,000m² of retail, office, residential and hotel accommodation. By linking the canal and city centre to Attwood Green in the south of the city, the building also plays a key role in the regeneration of the area.

Our engineers were challenged on a number of levels by the striking facade envisaged by the architect. We had to find material that would be solid enough to create a sculptural 'cube' while also allowing air and sunlight into the interior spaces, especially through the open-fretwork on its canal-facing side. In response, we selected bronze-tinted anodised metal panels that were durable and had a high resistance to weathering. Cut into giant jigsaw shaped pieces, they defy conformity and create drama through their dramatic positioning, and despite their complex appearance each is individually and easily replaceable if necessary.

As it is located next to existing buildings and canals, we had to carefully evaluate the mass of the building and its impact on its surroundings. After careful evaluation, we created a regular grid of post-tensioned slabs that could provide the support required both below and above ground. To be extra safe, we developed a monitoring strategy before work began to ensure allowable retaining wall, ground and building movements were not breached, and outlining contingency measures if they were.

The abstract facade houses premises inside that are similarly unique, attracting a thriving 24/7 community. In realising this iconic structure, the project team have successfully created Birmingham's first 'city within a city'.